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MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
LABORATORY SERVICES PROGRAM

Site Inspection Sampling Report
Dugan and Helterbrand Site
Marshfield, Missouri
December 17, 1985

FEB 6 1986

INTRODUCTION

The Dugan and Helterbrand Company treats processed and raw photographic film and lithographic material for recovery of silver. The film chips were treated with hyperchlorite solution prior to disposal. A spill at the plant in 1983 resulted in the death of several head of cattle owned by Mr. Helterbrand. On December 17, 1985, at the request of the Waste Management Program, samples were collected from the spill area and the area around an underground tank, used at one time for spent cyanide solution storage. The samples were collected by Sam Brenneke and Greg Schoen of the Laboratory Services Program. Other Department of Natural Resources employees present at the time of sampling were Chuck Kroeger of the Springfield Regional Office and Joe Rowe of the Waste Management Program.

METHODS

Picks were used to dig a series of holes six inches deep in each sampling location. A portion of soil was removed from each hole with a stainless steel spoon, placed in a stainless steel pan, composited, and placed in a glass jar. All samples were placed on ice to aid in preservation until analysis could be completed.

The sampling equipment was washed with soap and water and rinsed with de-ionized water and acetone after each sample was collected.

All analyses were performed by Environmental Analysis, Inc. in St. Louis, Missouri.

OBSERVATIONS

The Dugan and Helterbrand Company is located in Marshfield, Missouri in a flat area away from town. There did not appear to be much runoff from the property. A total of five samples were collected at the site on December 17, 1985. A drawing of the site indicating sampling points has been attached as Appendix A.



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SUPERFUND RECORDS

Page Two
3012 Site Sampling Report
Dugan and Helterbrand Site
Marshfield, Missouri
December 17, 1985

Sample #85-4766 was collected approximately twenty feet West of the Northeast shed in a low area of the adjacent field.

Sample #85-4767 was collected near the Northwest corner of the Northeast shed. There was a large pile of blueish colored film chips on the ground just West of this location.

Sample #85-4768 was collected approximately ten feet downslope of the underground tank located just South of the facility.


Sample #85-4769 was collected from around the buried tank South of the facility.

Sample #85-4770 was collected upslope and West of the facility to be used as a background sample.

RESULTS

The analytical results for samples collected December 17, 1985, at the Dugan and Helterbrand Company are attached as Appendix B.

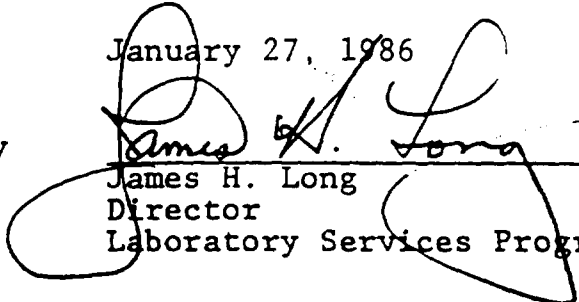
Submitted by


Sam Brenneke
Environmental Emergency Specialist
Field Services Section
Laboratory Services Program

Date

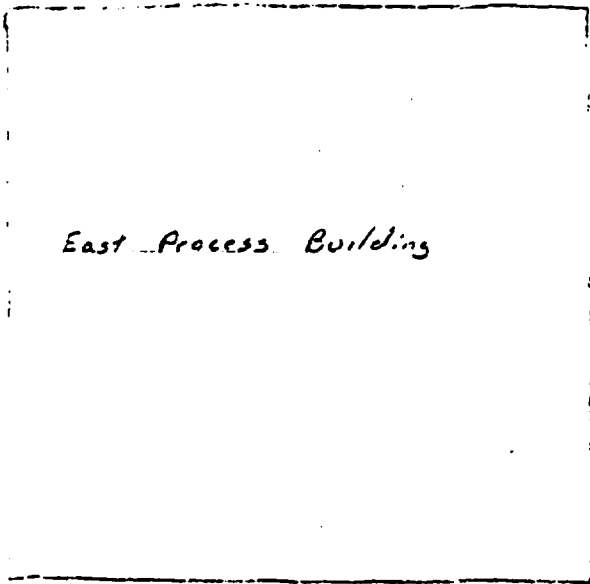
January 27, 1986

Approved by


James H. Long
Director
Laboratory Services Program

cc: Burt McCullough, Chief, Waste Management Program
John Nixon, Regional Administrator, Springfield Regional Office

APPENDIX A
SITE DRAWING



East Process Building

Dugan and Helterbrand
Site Sketch

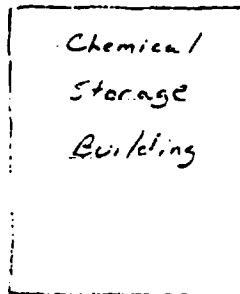
by: Sam Brenneke

Date: Jan. 27, 1986

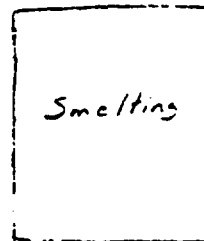
* 85-4767



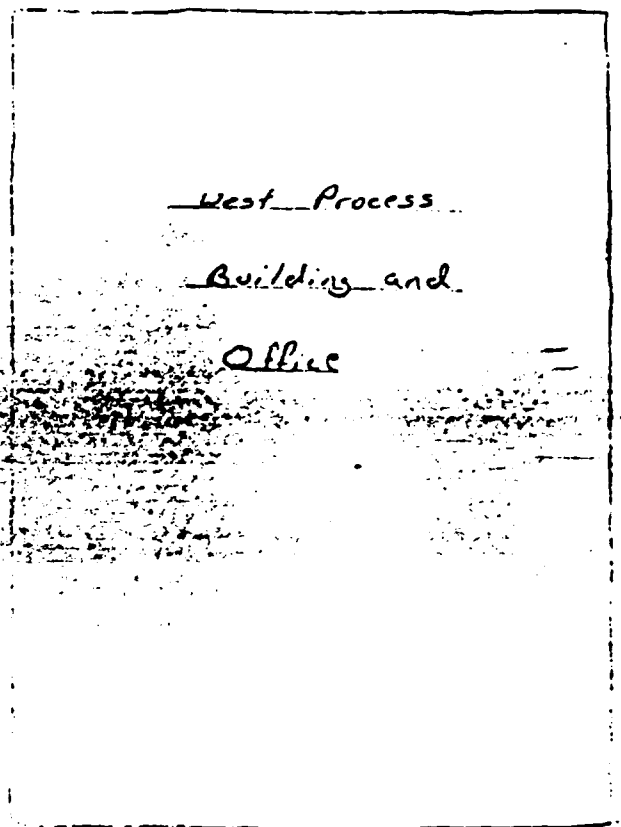
Blue Film
Chips



Chemical
Storage
Building



Smelting



West Process

Building and

Office

85-4

85-4769
*
Under
Tan

85-4770

* 85-4766

Fence

APPENDIX B
ANALYTICAL RESULTS

LABORATORY SERVICES PROGRAM
RESULT OF SAMPLE ANALYSIS

Sample No. 85-4766

Reported to: SAM BRENNEKE
Affiliation: EER

Date: 1/13/86
Project Code: 3535/3000

Sample Description:

DUGAN HELTERBRAND INC. SOIL SAMPLE FROM SPILL AREA NEAR
NE SHED IN ADJACENT FIELD DOWNSLOPE

Collected by: SAM BRENNEKE
Affiliation: EER

Date: 12/17/85

PARAMETERS

RESULTS

CYANIDE

0.236 UG/G

COMMENTS : ANALYZED BY: ENVIRONMENTAL ANALYSIS INC

LABORATORY SERVICES PROGRAM
RESULT OF SAMPLE ANALYSIS

Sample No. 85-4767

Reported to: SAM BRENNEKE
Affiliation: EER

Date: 1/13/86
Project Code: 3535/3000

Sample Description:
DUGAN HELTERBRAND INC., SOIL SAMPLE FROM SPILL AREA AT
NE SHED

Collected by: SAM BRENNEKE
Affiliation: EER

Date: 12/17/85

PARAMETERS

RESULTS

CYANIDE

0.884 UG/G

COMMENTS : ANALYZED BY: ENVIRONMENTAL ANALYSIS INC

LABORATORY SERVICES PROGRAM
RESULT OF SAMPLE ANALYSIS

Sample No. 85-4768

Reported to: SAM BRENNEKE
Affiliation: EER

Date: 1/13/86
Project Code: 3535/3000

Sample Description:
DUGAN HELTERBRAND SOIL SAMPLE 10' DOWN SLOPE OF BURRIED
TANK SOUTH OF BLDG

Collected by: SAM BRENNEKE
Affiliation: EER

Date: 12/17/85

PARAMETERS

RESULTS

CYANIDE

97.3 UG/G

COMMENTS : ANALYZED BY: ENVIRONMENTAL ANALYSIS INC

LABORATORY SERVICES PROGRAM
RESULT OF SAMPLE ANALYSIS

Sample No. 85-4769

Reported to: SAM BRENNEKE
Affiliation: EER

Date: 1/13/86
Project Code: 3535/3000

Sample Description:
DUGAN HELTERBRAND SOIL SAMPLE AT BURRIED TANK SOUTH OF
BLDG.

Collected by: SAM BRENNEKE
Affiliation: EER

Date: 12/17/85

PARAMETERS

RESULTS

CYANIDE

0.932 UG/G

COMMENTS : ANALYZED BY: ENVIRONMENTAL ANALYSIS INC

LABORATORY SERVICES PROGRAM
RESULT OF SAMPLE ANALYSIS

Sample No. 85-4770

Reported to: SAM BRENNEKE
Affiliation: EER

Date: 1/13/86
Project Code: 3535/3000

Sample Description:
DUGAN HELTERBRAND SOIL SAMPLE FOR BACKGROUND UPSLOPE AND
WEST OF THE SITE

Collected by: SAM BRENNEKE
Affiliation: EER

Date: 12/17/85

PARAMETERS

RESULTS

CYANIDE

0.225 UG/G

COMMENTS : ANALYZED BY: ENVIRONMENTAL ANALYSIS INC



CONSULTING ANALYTICAL SERVICES INTERNATIONAL

2804 EAST BATTLEFIELD, SPRINGFIELD, MISSOURI 65804, 417-882-1017, 1018

CERTIFICATE OF ANALYSIS

Date December 23, 19 85

Name Dugan & Helterbrand ATTENTION: MR. JOE HELTERBRAND

Address 190 George Street

City Marshfield, State Missouri 65706

SAMPLE DATE	SAMPLE DESCRIPTION PARAMETERS ANALYZED	RESULTS
9-13-85	Enzyme Treated Film Chips, Lot 9-13-1 Toxicant Extraction Procedure EP Silver	0.001 mg/l
9-13-85	Enzyme Treated Film Chips, Lot 9-13-2 Toxicant Extraction Procedure EP Silver	0.028 mg/l
9-16-85	Enzyme Treated Film Chips, Lot 9-16-1 Toxicant Extrqction Procedure EP Silver	0.083 mg/l

The above analyses were performed in accordance with accepted protocols as prescribed in:

- Standard Methods for the Examination of Water and Wastewater
- EPA Methods for Chemical Analysis of Water and Wastes
- EPA Sampling and Analysis Procedures for Screening Industrial Effluents for Priority Pollutants
- ASTM Standards
- AOAC Official Methods of Analysis
- FDA Bacteriological Analytical Manual
- EPA Test Methods for Evaluating Solid Waste — Physical/Chemical Methods
- EPA Methods of Organic Analysis

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